

# Advanced Satellite Manufacturing

U T A H   S T A T E   U N I V E R S I T Y

## CENTER

The Center for Advanced Satellite Manufacturing (CASM) is working to create a viable Utah-based satellite manufacturing enterprise based upon years of expertise and projects within Utah State University and its Space Dynamics Laboratory. CASM's approach involves using novel advanced manufacturing and design techniques to reduce the cost and time involved with satellite manufacturing while improving quality and performance.

## TECHNOLOGY

CASM's core manufacturing technology is being employed to develop a satellite platform, which can then be specialized to suit the needs of the customer through direct additive manufacturing. This manufacturing technique, referred to as Ultrasonic Consolidation, yields highly modular and easy to build, reliable satellites incorporating a honeycomb-type construction that allows the addition of circuitry, sensors, antennae, and other devices without adhesives.

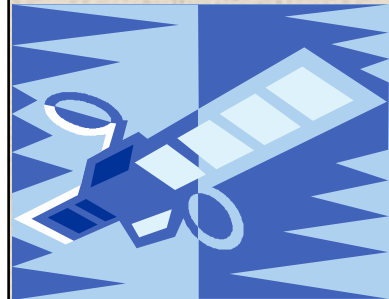
This year, CASM made significant progress with its technology and successfully demonstrated the capabilities of Ultrasonic Consolidation for satellite manufacturing. The Center also began development of a materials property database for structures developed using Ultrasonic Consolidation.

## ACCOMPLISHMENTS

CASM has formed a relationship with SDL and has secured additional funding to further their research. The Center has also developed a business model and has a business team in place for commercialization.

## THINK TANK

**What if there was...**



**A modular satellite  
that could be easily  
customized for a  
variety of  
applications  
without the need  
for difficult  
assembly?**

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